

REMARKS

Claims 1, 3-34, 36-43, 45-57 and 59-70 are pending in the application.

Claims 1, 3-34, 36-43, 45-57 and 59-70 have been rejected.

Claims 1, 11, 13, 15, 16, 24, 30-32, 34, 37, 40-43, 50, 52, 53, 57, 64, 66, and 67 have been amended. No new matter has been added. Support for these claim amendments can be found, at least, in ¶¶ 69-72, 95-101 and Figures 1-3 of the originally-filed Application.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1, 3-5, 43, 45-47, 57, and 59-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson et al., U.S. Patent No. 5,959,989, (“Gleeson”) in view of Beck et al., U.S. Publication No. 2001/0014097 (“Beck”). Applicants respectfully traverse this rejection.

Applicants have amended each of the independent claims 1, 43, and 57 to recite features that are not taught or fairly suggested in the references cited in the last Office Action. For example, independent Claim 1 has been amended to substantially recite:

receiving a packet, the packet comprising a multicast destination address, wherein the receiving is performed by a first line card in a first virtual network device sub-unit; and
 sending a copy of the packet to a second virtual network device sub-unit via a virtual network device link, wherein
 the virtual network device link couples the first virtual network device sub-unit and the second virtual network device sub-unit,
 the first virtual network device sub-unit and the second virtual network device sub-unit are configured to operate as a single virtual network device within a network,
 the virtual network device is configured to perform Layer 2 forwarding to forward the packet to one or more network devices within the network, and

the sending comprises sending at most one copy of the packet from one virtual network device sub-unit to another via the virtual network device link.

Support for this amendment can be found throughout the originally-filed Specification, and at least at paragraphs 69-72.

Applicants have reviewed the cited sections of Gleeson and Beck and can find no teaching or fair suggestion of, for example, “the virtual network device is configured to perform Layer 2 forwarding to forward the packet to one or more network devices within the network.” The cited sections of Beck describe a cluster of processor nodes that purportedly appears as a single processor node to client applications. *See* Beck ¶ 64, Abstract. The Office Action equates Beck’s cluster to the claimed virtual network device. *See* Office Action, p. 3. However, Beck’s cluster fails to teach or fairly suggest a virtual network device that is configured to perform Layer 2 forwarding of a packet to a network device within the network. At best, when one of Beck’s cluster processor nodes receives a packet addressed to the cluster alias address, that node executes the skinny stack routine to establish a new connection with a destination processor node within the cluster, where the destination node was chosen via a round robin routine to avoid overloading. *See* Beck ¶¶ 34, 44, 71. Merely implementing a round robin routine neither teaches nor fairly suggests performing Layer 2 forwarding. Thus, the cited sections of Beck fail to teach or fairly suggest the features of Claim 1, as amended. Applicants note that the cited sections of Gleeson, alone or in combination with the cited sections of Beck, also fail to teach or fairly suggest a virtual network device that is configured to perform Layer 2 forwarding of a packet to a network device within the network, as acknowledged on page 3 of the Office Action. Thus, the cited sections of Gleeson and

Beck, taken alone or in permissible combination, fail to teach or fairly suggest the features of Claim 1.

Accordingly, Applicants submit that independent Claim 1, as amended, is patentably distinguishable over the cited sections of Gleeson and Beck. For similar reasons, Claims 43 and 57, as amended, are also patentably distinguishable over Gleeson and Beck. Applicants therefore submit that independent Claims 1, 43, and 57, and all claims depending therefrom, are in condition for allowance. Applicants therefore respectfully request the Examiner's reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

Claims 13-17, 50-54, and 64-68 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte et al., U.S. Publication No. 2003/0198231, ("Kalkunte") in view of Beck. Applicants respectfully traverse this rejection.

Applicants have amended each of the independent claims 13, 50, and 64 to recite features that are not taught or fairly suggested in the references cited in the last Office Action. For example, independent Claim 13 has been amended to substantially recite:

receiving a packet via a virtual network device link, the packet comprising a unicast destination address, wherein
the virtual network device link couples a first virtual network device sub-unit and a second virtual network device sub-unit, and wherein
the first virtual network device sub-unit and the second virtual network device sub-unit are configured to operate as a single virtual network device within a network, and
the virtual network device is configured to perform Layer 2 forwarding to forward the packet to one or more network devices with the network; and
performing an egress lookup for the packet in response to the receiving the packet, wherein
the performing the egress lookup in a lookup table on a first line card comprises allocating a non-primary entry corresponding to a source address of the packet in the lookup table, if an entry

corresponding to the source address has not already been allocated, wherein the non-primary entry indicates a second line card.

Support for this amendment can be found throughout the originally-filed Specification, and at least at paragraphs 69-72 and 95-101.

Applicants have reviewed the cited sections of Kalkunte and Beck and can find no teaching or fair suggestion of, for example, “performing the egress lookup in a lookup table on a first line card comprises allocating a non-primary entry corresponding to a source address of the packet in the lookup table, if an entry corresponding to the source address has not already been allocated, wherein the non-primary entry indicates a second line card.”

The Office Action relies on Kalkunte to teach the claimed act of performing an egress lookup for the packet. *See* Office Action, p. 11. In particular, the Office Action asserts that receiving a packet with a valid egress port and destination module ID in the packet’s prepended module header and forwarding the packet to the egress port is equivalent to the claimed act of performing an egress lookup for the packet. *See* Office Action, p. 11. However, forwarding a packet to an egress port that is identified in the packet’s module header clearly fails to teach or fairly suggest performing any sort of egress lookup in a lookup table. *See* Kalkunte ¶ 37, ll.5-6.

The cited sections of Kalkunte also fail to teach or fairly suggest the claimed act of allocating a non-primary entry corresponding to a source address of the packet in the lookup table if such an entry has not already been allocated. In particular, Kalkunte’s routing table is used to lookup destination module IDs. *See* Kalkunte ¶¶ 38, 39. In contrast, Claim 13 allocates an entry corresponding to a source address. Since the act of looking up information in a routing table is not the same as the act of allocating an entry

in a lookup table, and since destination module IDs are not source addresses, the cited sections of Kalkunte fails to teach or suggest the claimed act of allocating a non-primary entry corresponding to a source address of Claim 13.

Finally, the cited sections of Kalkunte fail to teach or fairly suggest the claimed act of allocating a non-primary entry that indicates a second line card. As far as Applicants can discern, the cited sections of Kalkunte make no reference to allocating a non-primary entry corresponding to a packet's source address in a lookup table, where the non-primary entry indicates a line card other than the one that includes the lookup table. Thus, the cited sections of Kalkunte fail to teach or fairly suggest the claimed act of allocating a non-primary entry that indicates a second line card of Claim 13.

Applicants note that the cited sections of Beck, alone or in combination with the cited sections of Gleeson, also fail to teach or fairly suggest the claimed act of performing an egress lookup in a lookup table, as acknowledged by the Office Action on pages 11 and 12. Thus, the cited sections of Gleeson and Beck, taken alone or in permissible combination, fail to teach or fairly suggest the features of Claim 13.

Accordingly, Applicants submit that independent Claim 13, as amended, is patentably distinguishable over the cited sections of Kalkunte and Beck. For similar reasons, Claims 50 and 64, as amended, are also patentably distinguishable over Kalkunte and Beck. Applicants therefore submit that independent Claims 13, 50, and 64, and all claims depending therefrom, are in condition for allowance. Applicants therefore respectfully request the Examiner's reconsideration and withdrawal of the rejections to these claims and an indication of the allowability of same.

Claims 24 and 30-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo. Claims 34, 36-37, and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck and further in view of Gallo et al., U. S. Patent No. 6,760,776 (“Gallo”). Applicants respectfully traverse these rejections for at least the reasons set forth above with respect to independent claims 1, 13, 43, 50, 57 and 64.

Claims 6-7, 48, and 62 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck and further in view of Ellis et al., U.S. Publication No. 2002/0126671 (“Ellis”). Claims 8-12, 49, and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck and further in view of Kalkunte. Claims 40-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck, further in view of Gallo and further in view of Kalkunte. Claim 38 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck, further in view of Gallo and further in view of Ellis. Claims 18, 55, and 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Beck and further in view of Ellis. Claims 19-22, 56, and 70 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Beck and further in view of Gleeson. Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Beck, further in view of Gleeson, and further in view of Ellis. Claims 25, 26, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo and further in view of Gleeson. Claims 27 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo, further in view of Gleeson and further in view of Ellis. Claim

33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo and further in view of Ellis. Applicants respectfully traverse these rejections for at least the reasons set forth above with respect to independent claims 1, 13, 24, 34, 43, 50, 57, and 64.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5094.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

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